

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A nanocomposite magnet having a composition represented by the general formula: $R_xQ_yM_z(Fe_{1-m}T_m)_{bal}$, where R is at least one rare-earth element, Q is at least one element selected from the group consisting of B and C, M is at least one metal element that is selected from the group consisting of Al, Si, Ti, V, Cr, Mn, Cu, Zn, Ga, Zr, Nb, Mo, Ag, Hf, Ta, W, Pt, Au and Pb and that always includes Ti, T is at least one element selected from the group consisting of Co and Ni, and the mole fractions x, y, z and m satisfy the inequalities of

$$6 \text{ at}\% \leq x < 10 \text{ at}\%,$$

$$10 \text{ at}\% \leq y \leq 17 \text{ at}\%,$$

$$0.5 \text{ at}\% \leq z \leq 6 \text{ at}\% \text{ and}$$

$$0 \leq m \leq 0.5, \text{ respectively,}$$

the nanocomposite magnet including a hard magnetic phase and a soft magnetic phase that are magnetically coupled together,

wherein the hard magnetic phase is made of an $R_2Fe_{14}B$ -type compound, ~~and~~

wherein the soft magnetic phase includes an α -Fe phase and a crystalline phase ~~with a Curie temperature of 610 °C to 700 °C as its main phases, and~~

wherein the crystalline phase has a Curie temperature of 610 °C to 700 °C.

Claim 2 (original): The nanocomposite magnet of claim 1, wherein $6 \text{ at}\% \leq x \leq 8 \text{ at}\%$, and wherein the crystalline phase included in the soft magnetic phase has a Curie temperature of 610 °C to 650 °C.

Claim 3 (previously presented): The nanocomposite magnet of claim 1, wherein Ti accounts for 0.25 at% to 6 at% of the overall magnet.

Claim 4 (previously presented): The nanocomposite magnet of claim 1, wherein the content of the crystalline phase included in the soft magnetic phase is greater than that of an Fe₃B-type compound phase.

Claim 5 (previously presented): The nanocomposite magnet of claim 1, wherein the R₂Fe₁₄B-type compound phase has an average grain size of 10 nm to 70 nm, and wherein a soft magnetic phase with an average grain size of 1 nm to 10 nm is present on the grain boundary of the R₂Fe₁₄B-type compound phase.

Claim 6 (original): A rapidly solidified alloy to make a nanocomposite magnet, the alloy having a composition represented by the general formula: R_xQ_yM_z(Fe_{1-m}T_m)_{bal}, where R is at least one rare-earth element, Q is at least one element selected from the group consisting of B and C, M is at least one metal element that is selected from the group consisting of Al, Si, Ti, V, Cr, Mn, Cu, Zn, Ga, Zr, Nb, Mo, Ag, Hf, Ta, W, Pt, Au and Pb and that always includes Ti, T is at least one element selected from the group consisting of Co and Ni, and the mole fractions x, y, z and m satisfy the inequalities of

$$6 \text{ at}\% \leq x < 10 \text{ at}\%,$$

$$10 \text{ at}\% \leq y \leq 17 \text{ at}\%,$$

$$0.5 \text{ at}\% \leq z \leq 6 \text{ at}\% \text{ and}$$

$$0 \leq m \leq 0.5, \text{ respectively,}$$

wherein the alloy includes an R₂Fe₁₄B-type compound, an α -Fe phase, and a crystalline phase with a Curie temperature of 610 °C to 700 °C.

Claim 7 (original): The rapidly solidified alloy of claim 6, wherein $6 \text{ at}\% \leq x \leq 8 \text{ at}\%$, and

wherein the crystalline phase included in a soft magnetic phase has a Curie temperature of 610 °C to 650 °C.

Claims 8-12 (canceled).

Claim 13 (original): A decision method for a nanocomposite magnet, the method comprising the steps of:

preparing multiple rapidly solidified alloys as materials for a nanocomposite magnet, each said alloy having a composition represented by the formula: $R_xQ_yM_z(Fe_{1-m}T_m)_{bal}$, where R is at least one rare-earth element, Q is at least one element selected from the group consisting of B and C, M is at least one metal element that is selected from the group consisting of Al, Si, Ti, V, Cr, Mn, Cu, Zn, Ga, Zr, Nb, Mo, Ag, Hf, Ta, W, Pt, Au and Pb and that always includes Ti, T is at least one element selected from the group consisting of Co and Ni, and the mole fractions x, y, z and m satisfy the inequalities of

$$6 \text{ at}\% \leq x < 10 \text{ at}\%,$$

$$10 \text{ at}\% \leq y \leq 17 \text{ at}\%,$$

$$0.5 \text{ at}\% \leq z \leq 6 \text{ at}\% \text{ and}$$

$$0 \leq m \leq 0.5, \text{ respectively, and}$$

determining whether or not a rapidly solidified alloy to make a nanocomposite magnet, which has been selected from the multiple rapidly solidified alloys, includes a soft magnetic phase having a Curie temperature of 610 °C to 700 °C.

Claim 14 (original): The method of claim 13, wherein $6 \text{ at}\% \leq x \leq 8 \text{ at}\%$, and wherein the crystalline phase included in the soft magnetic phase has a Curie temperature of 610 °C to 650 °C.

Claim 15 (original): The method of claim 14, wherein the step of determining includes subjecting the rapidly solidified alloy to make a nanocomposite magnet to thermogravimetry.

Application No. 10/596,371

October 8, 2009

Reply to the Office Action dated June 8, 2009

Page 6 of 12

Claims 16-19 (canceled).